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December 13, 2005

AGENDA ITEM 6

TO: MEMBERS OF THE BENEFITS AND PROGRAM ADMINISTRATION COMMITTEE

I. SUBJECT: Pension Contribution Stabilization Accounts

II. PROGRAM: Actuarial & Employer Services

III. RECOMMENDATION: Information

- **IV. ANALYSIS:**

The idea of Pension Contribution Stabilization Accounts (also referred to as "rainy day" funds) is a concept that CalPERS staff has been researching for several months. It was hoped that rainy day funds would assist employers with the budget challenges caused by fluctuations in the employer required contribution rate.

In April 2005, staff brought an information item to the Benefits and Program Administration Committee which discussed various issues that needed to be addressed before determining whether or not CalPERS should pursue the implementation of "rainy day" funds.

The following is a list of the issues that needed analysis.

- What legislation and/or regulations would be needed to create rainy day funds?
- If implemented, should rainy day funds be voluntary or mandatory?
- If implemented, should rainy day funds be held at CalPERS, by the employer(s), or by some other entity?
- What, if any, are the accounting issues associated with creating rainy day funds?
- What does an actuarial analysis demonstrate about the viability of rainy day funds? That is, will they work?

This agenda item contains the results of the actuarial analysis and the responses from several hundred employers about some of the issues above. If, after reviewing this material, the Board still wishes to have more

detailed answers to their issues above, another more comprehensive agenda item will be brought to the Board in the near future.

Basic Design Considerations

There are two completely different possible objectives of rainy day funds. Each objective leads to completely different designs of rainy day accounts.

The first possible objective is additional employer rate smoothing. Under this approach the goal would be to have total employer contribution rate as constant as possible. When the CalPERS' required employer contribution was below this constant rate, the difference would flow into the rainy day account. When the CalPERS' required employer contribution was above this constant rate, the difference would come out of the rainy day account.

The second possible objective is to match the total required employer's contribution with the employer's financial condition. This is vastly different from the first objective and has nothing to do with smoothing the employer's contribution. Under this second objective, the rainy day account would function as follows. In good budget years, an employer would contribute over and above their CalPERS required contribution with the excess flowing into rainy day fund. In bad budget years, money would flow from the rainy day fund to pay part of the required CalPERS employer contribution rate.

Over the past several months, CalPERS actuaries have analyzed rainy day accounts under both of these objectives. This agenda item contains the results of that analysis for both types.

Employers' Perspectives

After meeting with hundreds of local employers to discuss the newly adopted rate stabilization policies and "rainy day" funds, the following anecdotal responses by employers are included.

One hundred percent of employers questioned indicated they were opposed to any mandated "rainy day" accounts. If there were voluntary accounts set aside in an irrevocable trust to be used only as a rainy day fund and not for possible benefit improvements or any other purpose of the employer, the employers felt that the rainy day funds should be held at CalPERS.

On the issue of design type, the employers overwhelmingly favored a design that helped produce more stable contribution rates as opposed to a rainy day fund that attempted to match total employer contributions with the employer's ability to pay

Actuarial Analysis of Objective 1 Type Rainy Day Funds – Stable Employer Contribution Rates

Under this objective the rainy day fund is used to further stabilize employer contribution rates. It is hoped that a nearly constant total employer contribution would be achieved. The employer normal cost is the cost of providing benefits for one year service and is the long term employer contribution rates. Therefore, it is natural to try to design a rainy day fund that uses the employer normal cost as the threshold for deposits to and withdrawals from the "rainy day" funds.

Under this concept, employers would contribute to the "rainy day" fund when the regular CalPERS rate is below the normal cost (i.e. when there are excess assets) and money would flow from the "rainy day" fund when the regular CalPERS rate is above the employer normal cost (i.e. when there is an unfunded liability).

For example, if the employer normal cost is 10% of payroll and the CalPERS required employer contribution rate is 5% of payroll, then 5% of payroll would be deposited into the "rainy day" fund.

On the other hand, if the employer normal cost is 10% of payroll and the CalPERS required employer contribution rate is 15% of payroll, then 5% of payroll is withdrawn from the "rainy day" fund and sent to the PERF (assuming money is available in the rainy day fund).

Our modeling has shown that the success rate for such a design is quite low. The main reason for the low success rate stems from the fact that the newly adopted rate stabilization policies have done a great deal to reduce volatility in employers' contributions. So, other mechanisms superimposed upon our new stabilization methodology will not be expected to have major impact. Further, most plans at CalPERS currently have an unfunded liability and contributions into the rainy day accounts would not occur until a plan developed a surplus. That will probably take years.

The table below contains the main results of the actuarial analysis performed on **plans that are currently 85% funded**:

Probability that funds will be deposited in next 5 years	9%-15%
Probability of no withdrawals in next 50 years	60%-70%
Probability of employer contributing normal cost	25%-35%
Probability of money being available when needed	4%-6%

Staff also analyzed whether or not such rainy day accounts would be more successful if their implementation were done when plans are closer to 100% funded. The table below displays main results **for plans currently 100% funded**:

Probability that funds will be deposited in next 5 years	50%-55%
Probability of no withdrawals in next 50 years	40%-45%
Probability of employer contributing normal cost	25%-35%
Probability of money being available when needed	8%-10%

As can be seen, establishing these rainy day accounts when plans are in better financial position increases the likelihood of funds being deposited. However, the likelihood of funds being in the rainy day accounts when needed is still very low.

Actuarial Analysis of Objective 2 Type Rainy Day Funds – Matching Employer's Ability to Pay

Under this design type, money flow into and out of the stabilization account would be based on two criteria:

- The regular CalPERS employer contribution rate
- The employer's budget (i.e. is it a bad, ok, or good year financially)

The design that was studied consisted of setting the total contribution from the employer in "good" years to 150% of the employer's normal cost. In "ok" years the total contribution from the employer would be 100% of normal cost. In "bad" years, the total employer contribution would be 50% of

normal cost. Money would be flowing in and out of the rainy day fund to achieve the desired contribution level. Attachment A contains various graphs and a table demonstrating how the flow of money would occur.

It is important to realize that establishing "rainy day" funds aimed at matching the employer's ability to pay does not result in stable contribution rates. Instead, trying to match the total employer contribution to the employer's ability to pay increases the volatility in employer contributions. In fact, the analysis indicated that the **volatility in contribution rates would more than double** and return to the levels similar or even higher than before the adoption of the rate stabilization policies by the Board in April 2005.

In addition to increasing rate volatility, the analysis showed that the likelihood of being able to withdraw money from the rainy day when needed is very low. Here are some of the main results of the analysis performed for **plans currently 85% funded**:

Probability that funds will be deposited in next 5 years	18%-25%
Probability of no withdrawals in next 50 years	33%-39%
Probability of money being available when needed	7%-9%

Under this scenario, most plans have a contribution rate in excess of 150% of normal cost and contributions would not flow into rainy day accounts until the employer rate decreased to lower levels.

Staff tested the same design assuming the rainy day accounts would be implemented when plans are 100% and have an employer contribution rate equal to the normal cost. Doing so slightly improved the results but still showed the very low likelihood of money being available when needed. Here are some of the main results of the analysis performed **for plans currently 100% funded:**

Probability that funds will be deposited in next 5 years	83%-87%
Probability of no withdrawals in next 50 years	9%-13%
Probability of money being available when needed	15%-19%

A major issue associated with this design type is how to set criteria for "good" vs. "ok" vs. "bad" revenue years. It is highly likely that there is no set of criteria that would apply across all employers. Further, it is almost certain that not all employers would have "good", "ok", or "bad" years at the same time. Implementing this design for the State only might be feasible but not for all public agencies using the same triggers and definitions.

Overall Results

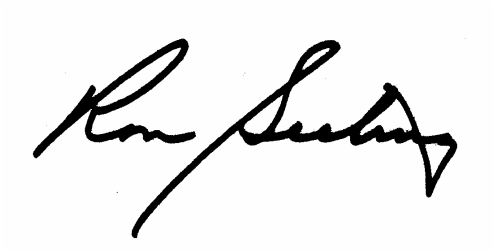
Overall, regardless of the design type studied, the new rate smoothing methods have greatly reduced the need for rainy day funds and the chance for success of such funds. The best course of action might be to put aside the idea of rainy day funds until it is determined how the new smoothing methods are working. In the next few years this issue could be revisited to determine whether or not these rainy day accounts are needed.

V. STRATEGIC PLAN:

The work on Pension Contribution Stabilization Accounts supports Goal IV of the CalPERS' Strategic Plan. That goal reads as follows:

Goal IV
Assure that sufficient funds are available, first, to pay benefits, and second, to minimize and stabilize employer contributions.

Alan Milligan, Managing Actuary
Actuarial & Employer Services Division



Ron Seeling, Chief Actuary
Actuarial & Employer Services

ATTACHMENT A

Design #2
Matching Employer's Ability to Pay

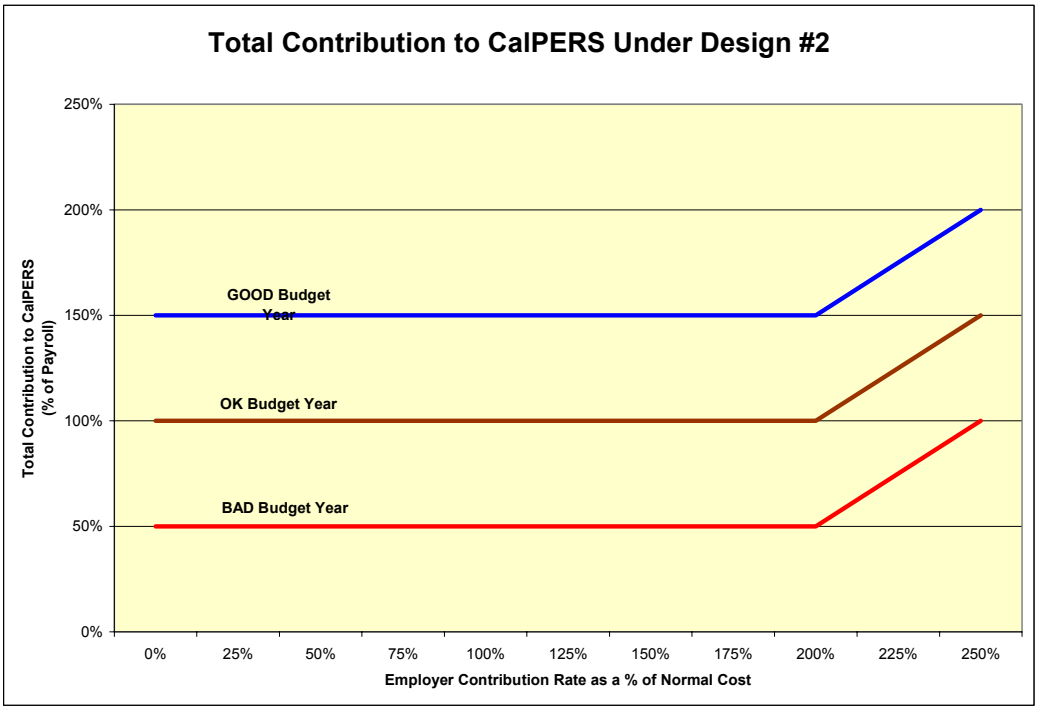
Proposed Money Flow

As explained earlier, the design that was studied consisted of setting the total contribution from the employer in "good" years to 150% of the employer's normal cost. In "ok" years the total contribution from the employer would be 100% of normal cost. In "bad" years, the total employer contribution would be 50% of normal cost. Money would be flowing in and out of the rainy day fund to achieve the desired contribution level.

The following table shows how the money flow would work under design #2:

Design #2 – Matching Employer's Ability to Pay - Proposed Money Flow				
		Employer's Economic Condition for the Fiscal Year		
		Good	**OK**	**Poor**
Employer's Contribution Rate	**High** Total Er Rate > 150% of Er Normal Cost	**Withdrawal =** Lesser of Total Er Rate – 150% of Er Normal Cost Or 50% of Er Normal Cost	**Withdrawal =** Lesser of Total Er Rate – Er Normal Cost Or Er Normal Cost	**Withdrawal =** Lesser of Total Er Rate – 50% of Er Normal Cost Or 150% of Er Normal Cost
	Medium High Total Er Rate < 150% of Er Normal Cost and Total Er Rate > Er Normal Cost	**Contribution =** 150% of Er Normal Cost – Total Er Rate (with min of Ee Contribution – Total ER Rate)	**Withdrawal =** Total Er Rate – Er Normal Cost	**Withdrawal =** Total Er Rate – 50% of Er Normal Cost
	Medium Low Total Er Rate < Er Normal Cost and Tot Er Rate > 50% of Er Normal Cost	**Contribution =** 150% of Er Normal Cost – Total Er Rate (with min of Ee Contribution – Total ER Rate)	**Contribution =** Er Normal Cost – Total Er Rate (with min of Ee Contribution – Total ER Rate)	**Withdrawal =** Total Er Rate – 50% of Er Normal Cost
	Low Total Er Rate < 50% of Er Normal Cost	**Contribution =** 150% of Er Normal Cost – Total Er Rate (with min of Ee Contribution – Total Er Rate)	**Contribution =** Er Normal Cost – Total Er Rate (with min of Ee Contribution – Total ER Rate)	**Contribution =** 50% of Er Normal Cost – Total Er Rate (with min of Ee Contribution – Total ER Rate)

The following graph shows what the total contribution to CalPERS would be under design #2.



The following graph shows what the money flow in and out of the rainy day fund would be under design #2.